

REMARKS/ARGUMENTS

Claims 11-15, 17-20, 22 and 24-29 are active.

Claim 11 has been amended to define that the process consists essentially of the placement of a powder defined in the claims and in doing so limits the scope of a claim to the specified materials or steps "and those that do not materially affect the basic and novel characteristic(s)" of the claimed invention. See MPEP 2111.03. The basic and novel characteristics are the use of more than 40% by weight of sodium bicarbonate in contrast to the art's teachings of using other actives to combat mites and the generalized teachings of sodium bicarbonate as a filler.

The dependent claims have been amended consistent with this amendment to Claim 11.

Claims 26-29 find support in Example 1 on page 5, Example 2 on page 6, Example 4 on page 6, and Examples 6-8 on page 8 (see also Table 2).

No new matter is added.

The Examiner has maintained the obviousness rejections to allege that the claims would have been obvious in view of Bessette (I) (US2002/0028256), Bessette (II) (USPN 6887899), and either NPL "Acarid killer" or Knight (USPN 5439690) taken in view of the evidence given by NPL Mills and Misato (USPN 4599233) and then further in view of Applying pesticides correctly to reject Claim 12 or NL silica to reject Claims 18, 19 and 24.

The claims are amended to define that the process consists essentially of applying a power that consists essentially of sodium bicarbonate or of sodium bicarbonate and silica. Therefore, the powder in the claimed process is free of other acaricidal active substances as is required in the cited references relied upon in the rejections.

Bessette (I) teaches essential oils and/or derivatives against mites [0002]. The essential oils may be mixed with a carrier [0018]. Bessette defines the carrier [0027] as "an

inert or fluid material, which may be inorganic or organic and of synthetic or natural origin, with which the active compound is mixed or formulated to facilitate its application to the container or carton or other object to be treated, or its storage, transport and/or handling”.

The plant essential oils on a carrier may be used on “*containers and cartons for stored food*” [0025].

Silica is cited among a long list of possible carriers by Bessette (I) [0029]: “kaolins, clays, vermiculite, alumina, silica, chalk, calcium carbonate, talc, attapulgite, montmorillonite, kieselguhr, etc”.

Bessette (II) also teaches essential oils against dust mites (Col 2, Lines 31-33). An even longer list of carrier or diluents is disclosed by Bessette (II) among which include: “*bentonite, fullers earth, ground natural minerals, such as kaolins, clays, talc, chalk, quartz, attapulgite, montmorillonite or diatomaceous earth, vermiculite, and ground synthetic minerals, such as highly-dispersed silicic acid, alumina and silicates, crushed and fractionated natural rocks such as calcite, marble, pumice, sepiolite and dolomite, as well as synthetic granules of inorganic and organic meals, and granules of organic materials such as sawdust, coconut shells, corn cobs and tobacco stalks*” (Col. 5, lines 58-64).

Bessette (I) and (II) do not describe or suggest a process for combating acarids in the storage of cereals with a powder consisting essentially of sodium bicarbonate or of sodium bicarbonate and silica in the manner that is claimed.

Bessette (I) is silent on sodium bicarbonate and Bessette (II) teaches that silica is a “carrier”. However, it is undisputed that both Bessette (I) and (II) teach essential oils as acaricidal active substance.

NPL “Acarid killer”, similarly to Bessette (I) and (II), teaches plant oils such as eugenol as active ingredients for crawling insects and mites, indoor and outdoor uses for walls, cabinets, window and door frames,... Sodium Bicarbonate is listed among a long list of

“other ingredients” including kaolin, calcium carbonate but not as active ingredients useful for combating acarids. Those two “other ingredients” are in the list of Besette (I) and (II) carriers.

Knight teaches a composition for controlling insects, which differ substantively from acarids for the length of reasons made of record previously. Knight’s composition includes 5-91% of alkaline earth carbonate, 6-95% alkali metal bicarbonate, 1-93% scenting agent, and up to 90% absorbent material (Col. 3, lines 34-38). Knight provides no salient teachings about acarids, and certainly not regarding acarids in the storage of cereals. Therefore, for the reasons made of record previously, Knight has no relevance to the claimed invention and would not have been used to modify the primary references absent improper hindsight reconstruction of the present claims.

Indeed, Knight teaches that: when ants or other insects move amongst the composition particles, the particles tend to work themselves between the insect’s protective body plates and they tend to pierce the exoskeleton (Col. 2, Lines 60-63). Acarids are arthropod that are not insects (“insects”: from latin in secta = in sections), therefore they not having multiple body plates described by Knight.

Mills teaches that *mites feed on kernels, grain dust, or seedborne fungi; prey on other mites, or act as scavengers and saprobes* (Page 332, col. 2, 2nd paragraph). Mills scheme in Fig. 1.G (Page 332) teaches that *mites can feed on fungi as well as seeds, so both are primary and secondary consumers* (Page 332, col. 2, 4th paragraph). Fungi and seeds may interact:

- Mites Cheylatus are qualified as 2° = secondary consumer (see legend Fig. 1): they are predators and are fed on Mites Acarus,
- Mites Acarus and Fungi are qualified by Mills as 1°= primary consumer: Mites Acarus take food on fungi and on seed as indicated by both arrows,
- Seed is qualified as P = “Producer”.

Therefore Mills does not teach that Mites, e.g., *Acarus*, are totally dependant on fungi to survive.

While Misato teaches that sodium bicarbonate has a high fungicidal effect on plant disease (Col 1, Line 37), Misato synergetic composition comprises sodium bicarbonate and a food emulsifier (Col. 2, Line 13-15) and Misato like the other references cited in the rejections fail to teach combating acarids with a powder consisting essentially of sodium bicarbonate or of sodium bicarbonate and silica, with more than 40w% of sodium bicarbonate.

Therefore, at the time the invention was made, the person skilled in the art of acaricidal compositions for cereals, reading Bessette (I) and (II) and NPL "Acarid killer", teaching the use of essential oils with carriers against acarids would not have obviously conceived of a process for combating acarids in the storage of cereals with a powder without essential oils (see amended Claim 11 "consisting essentially of").

Nor would one have found it obvious from Mills with Misato's teaching of sodium bicarbonate's fungicidal effect, that a powder consisting essentially of sodium bicarbonate or of sodium bicarbonate and silica may be used effectively to combat acarids in the storage of cereals. Indeed Mills teaches that acarids are fed on by other acarids or on fungi or on cereal seeds.

Rather it was the present inventors who have discovered that a powder consisting essentially of sodium bicarbonate or sodium bicarbonate and silica efficiently combats acarids, with for instance:

- 95% death rate of *Acarus* silo acarids after 48 hours (example 1)--see Claim 26
- 100% death rates of *Tyrophagus putrescentiae* acarids after 24 hours (example 2)--see Claim 27.

The other references: "Applying Pesticides Correctly, or NPL "Silica" fail to make up for that lacking and/ or that teaching away in the primary references.

Reconsideration and withdrawal of the rejections is requested.

A Notice of Allowance is also requested.

Respectfully submitted,

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